

IN THE CLAIMS:

1. (Currently amended) An automatic, mechanical, continuously variable transmission

(1) comprising

an input shaft (2);

a flywheel (10) connected to integral with the input shaft;

a drive assembly (5) including ~~idle with respect to the input shaft (2) and having a~~
drive pulley (6) defined by a first half-pulley (6a) and a second half-pulley (6b) which define
a groove (8) of variable width for driving a ∇ belt (C);

friction clutch means (12) interposed axially between said first half-pulley (6a) and
said flywheel (10);

a centrifugal actuating assembly (42) comprising a centrifugal actuating device (40)
controlling said clutch means (12); said actuating device (40) including push means (54, 61)
for exerting an axial thrust on said first half-pulley (6a) and for setting said clutch means (12)
to a torque-transmission condition in response to when an angular speed value of said input
shaft (2) is greater than a first threshold value, so as to connect said drive pulley (6) angularly
to said flywheel (10), and

a speed regulating device (41) for moving said second half-pulley (6b) axially with
respect to said first half-pulley (6a) to adjust the width of the groove (8) of the drive pulley
(6) in response to speed variations ~~in the speed~~ of said input shaft (2), said speed regulating
device (41) being active when the angular speed value of said input shaft (2) is above a
second threshold value of the angular speed of the input shaft (2); said second threshold value
being higher than said first threshold value; ~~characterized in that said actuating device (40)~~
~~comprises push means (54, 61) which exert axial thrust on said first half-pulley (6a) at each~~

~~speed value of said input shaft (2) is above said first threshold value.~~

2. (Currently amended) A transmission as claimed in Claim 1, ~~characterized in that~~
wherein said drive assembly (5) comprises a sleeve (15) fitted to said input shaft (2) ~~in axially~~
~~free manner and in angularly free manner at least in one relative rotation direction;~~ said first
half-pulley (6a) being fixed with respect to said sleeve (15); and the second half-pulley (6b)
being fitted in sliding manner to said sleeve (15).

3. (Currently amended) A transmission as claimed in Claim 1, ~~characterized in that~~
wherein said clutch means (12) comprises a friction disk (24) interposed axially between said
first half-pulley (6a) and said flywheel (10).

4. (Currently amended) A transmission as claimed in Claim 3, ~~characterized in~~
~~that~~ wherein said actuating device (40) comprises a number of auxiliary weights (48) rotating
~~integrally~~ with said input shaft (2); said push means (54, 61) being interposed between said
auxiliary weights (48) and said sleeve (15) to move said first half-pulley (6a) towards said
flywheel (10) and to grip said friction disk (24) between said flywheel (10) and said first
half-pulley (6a).

5. (Currently amended) A transmission as claimed in Claim 4, ~~characterized by~~
further comprising a reaction disk (45) ~~integral with~~ connected to the input shaft (2) and
having a conical wall (46); said actuating device (40) comprising a number of centrifugal
auxiliary weights (48) cooperating with said conical wall (46); said push means (54, 61) of

said actuating device (40) comprising an actuating ring (54) having a conical surface (56) facing said conical wall (46) of said reaction disk (45); and said auxiliary weights (48) having respective conical face surfaces (51, 53) cooperating respectively with said conical surface (56) of said actuating ring (54) and with said conical wall (46) of said reaction disk (45) to move said actuating ring (54) axially towards said sleeve (15) by virtue of the radial movement of said auxiliary weights (48).

6. (Currently amended) A transmission as claimed in Claim 5, ~~characterized in that~~ wherein said actuating device (40) comprises a tubular drive member (61) ~~pushed integrally with~~ connected to said sleeve (15); said actuating ring (54) and said tubular member (61) having respective facing, complementary conical friction surfaces (59, 60).

7. (Currently amended) A transmission as claimed in Claim 5, ~~characterized in that~~ wherein said speed regulating device (41) comprises a push disk (65) ~~integral with~~ connected to said second half-pulley (6b) and having a conical wall (67) facing said conical wall (46) of said reaction disk (45); and a number of main weights (68) having respective conical face surfaces (70, 71) cooperating with said conical walls (46, 67) to move said push disk (65) axially towards said flywheel (10) by ~~virtue of the~~ radial movement of said main weights (68).

8. (Currently amended) A transmission as claimed in Claim 1, ~~characterized by~~ further comprising a torque-sensitive compensating device (13) acting between said half-pulleys (6a, 6b).

9. (Currently amended) A transmission as claimed in Claim 8, ~~characterized in that~~ wherein said second half-pulley (6b) is fitted to said sleeve (15) to slide within limits defined by said compensating device (13).

10. (Currently amended) A transmission as claimed in Claim 9, ~~characterized in that~~ wherein said compensating device (13) comprises at least one radial pin (18) ~~integral with~~ connected to said sleeve (15) and a hub of said second half-pulley (6b); and at least one corresponding slot (19) formed in ~~a~~ in said sleeve and said hub of said second half-pulley (6b), ~~or vice versa~~.

11. (Currently amended) A transmission as claimed in Claim 10, ~~characterized in that~~ wherein said slot (19) is defined circumferentially by an axial side (19a) which cooperates with said pin (18) when accelerating, and by a sloping side (19c) which cooperates with said pin (18) when decelerating, to generate additional axial thrust acting between said half-pulleys (6a, 6b) in the axial compression direction of the belt (C).

12. (Currently amended) A transmission as claimed in Claim 2, ~~characterized by~~ further comprising a free wheel (32) interposed between said input shaft (2) and said sleeve (15).